Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0604221N: P-3 Modernization Program

BA 5: Development & Demonstration (SDD)

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.458	3.644	3.574	0.000	3.574	3.618	3.680	3.766	3.844	Continuing	Continuing
1152: P-3 Sensor Integration	2.109	1.493	1.469	0.000	1.469	1.483	1.508	1.543	1.575	Continuing	Continuing
3016: Fatigue Life Mgmt Program	1.349	2.151	2.105	0.000	2.105	2.135	2.172	2.223	2.269	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program provides for P-3C aircraft systems development and test in subsurface and surface surveillance, search, detection, localization, classification, attack and communications in support of Sea Shield/Sea Power 21. The P-3C Sensor Integration project integrates advanced and future ASW and ASuW sensors, weapons systems, and supporting technology into legacy P-3C systems and phased capabilities upgrades. The program also advances Air Acoustic Rapid COTs Insertion (ARCI) efforts by replacing legacy MIL-SPEC UYS-1 with increasingly open, COTS-based architecture. Also, P-3 Sensor Integration will expand software and hardware technology of P-3 systems to integrate additional sensor and processing capabilities, environmental prediction tools, tactical decision aides, color capabilities and communications to improve aircrew tactical proficiency and battlespace awareness. Sensor Integration is a continuous effort to integrate and test newly evolving ASW and ASuW technologies such as Improved Extended Echo Ranging (IEER) and Multistatic Acoustic Coherent (MAC) family of Multi-Static active systems, Acoustic Rapid Cots Insertion (ARCI), Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements. The Over the Horizon (OTH) Wideband system will provide the P-3C AIP aircraft the capability to conduct OTH Satellite communications which will allow the on-station aircraft to transmit real-time sensitive acoustic intelligence data which will maximize enemy detections, tracking and engagement opportunities. Due to program delays with the OTH system, FY09 funds were realigned from the Sensor Integration project to Test for OTH.

Fatigue Life Management Program is required to manage P-3/EP-3 inventory fatigue life and includes ongoing structural analysis, analyzing emergent structural issues, conducting engineering studies, assessing Fleet impact, and applying new technologies such as Non-Destructive Inspection (NDI) techniques.

Exhibit R-2, **RDT&E Budget Item Justification**: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0604221N: P-3 Modernization Program

BA 5: Development & Demonstration (SDD)

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	3.562	3.659	0.000	0.000	0.000
Current President's Budget	3.458	3.644	3.574	0.000	3.574
Total Adjustments	-0.104	-0.015	3.574	0.000	3.574
 Congressional General Reductions 		-0.015			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
Congressional Adds		0.000			
 Congressional Directed Transfers 		0.000			
Reprogrammings	0.000	0.000			
SBIR/STTR Transfer	-0.104	0.000			
Program Adjustments	0.000	0.000	3.574	0.000	3.574

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy PE 0604221N: P-3 Modernization Program 1152: P-3 Sensor Integration

BA 5: Development & Demonstration (SDD)

BA 3. Bevelopment & Bemonstratio	n (000)										
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1152: P-3 Sensor Integration	2.109	1.493	1.469	0.000	1.469	1.483	1.508	1.543	1.575	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides for P-3C aircraft systems development and test in subsurface and surface surveillance, search, detection, localization, classification, attack and communications in support of Sea Shield/Sea Power 21.

The P-3C Sensor Integration project integrates advanced and future ASW and ASuW sensors, weapons systems, and supporting technology into legacy P-3C systems and phased capabilities upgrades. The program also advances Air Acoustic Rapid COTs Insertion (ARCI) efforts by replacing legacy MIL-SPEC UYS-1 with increasingly open, COTS-based architecture. Also, P-3 Sensor Integration will expand software and hardware technology of P-3 systems to integrate additional sensor and processing capabilities, environmental prediction tools, tactical decision aides, color capabilities and communications to improve aircrew tactical proficiency and battlespace awareness.

Sensor Integration is a continuous effort to integrate and test newly evolving ASW and ASuW technologies such as Improved Extended Echo Ranging (IEER) and Multistatic Acoustic Coherent (MAC) family of Multi-Static active systems, Acoustic Rapid Cots Insertion (ARCI), Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements. The Over the Horizon (OTH) Wideband system will provide the P-3C AIP aircraft the capability to conduct OTH Satellite communications which will allow the on-station aircraft to transmit real time sensitive acoustic intelligence data which will maximize enemy detections, tracking and engagement opportunities. Due to program delays with the OTH system, FY09 funds were realigned from the Sensor Integration project to Test for OTH.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Conduct P-3C OTH Satellite communications	2.109	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE
PE 0604221N: P-3 Modernization Program
1152: P-3 Sensor Integration

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: The OTH Wideband program researched P-3C AIP aircraft the capability to conduct OTH Satellite communications. Specifically, this program designed, developed, integrated, and evaluated this capability on the P-3C AIP aircraft.					
P-3 integration of ASW and ASuW sensors / weapon systems	0.000	1.493	1.469	0.000	1.469
FY 2010 Plans: Continued Sensor Integration effort to integrate and test newly evolving ASW and ASuW technologies such as Improved Extended Echo Ranging (IEER) and Multistatic Acoustic Coherent (MAC) family of Multi-Static active systems, Acoustic Rapid Cots Insertion (ARCI), Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements.					
FY 2011 Base Plans: Continue Sensor Integration effort to integrate and test newly evolving ASW and ASuW technologies					
such as Improved Extended Echo Ranging (IEER) and Multistatic Acoustic Coherent (MAC) family of Multi-Static active systems, Acoustic Rapid Cots Insertion (ARCI), Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements.					
Accomplishments/Planned Programs Subtotals	2.109	1.493	1.469	0.000	1.469

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604221N: P-3 Modernization Program

1152: P-3 Sensor Integration

C. Other Program Funding Summary (\$ in Millions)

FY 2011 FY 2011 **Cost To** FY 2011 Line Item FY 2009 **FY 2010** Base OCO Total FY 2012 FY 2013 FY 2014 FY 2015 Complete Total Cost APN/0538: P-3 Series 340.100 462,400 222,000 6.000 228.000 202.400 66.800 44.800 12.000 0.000 4.967.000

D. Acquisition Strategy

The Air Deployable Active Receiver/Improved Extended Echo Ranging (IEER) Operational Requirements Document (Ser# 297(1)-05-97)) for 1152 was approved on 29 December 1997. The P-3 ASUW Improvement Program (AIP) ORD (Ser#355-88-94) for 2417 was approved on 30 March 1994. The Acquisition Plan (AIR-93-08A Rev 2) was approved on 30 March 1998. The ASR (AIR-ASR-26A Rev 3) was approved 29 Nov 1999 which includes Over the Horizon (OTH) Wideband system.

E. Performance Metrics

Successfully complete Developmental Test.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy

PE 0604221N: P-3 Modernization Program

1152: P-3 Sensor Integration

Product Development (\$ in Millions)

				FY 2	:010	FY 2 Ba	-	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/FFP	LM St. Paul, MN	8.678	0.000		0.000		0.000		0.000	0.000	8.678	8.678
Systems Engineering	SS/CPFF	LM Manassas, VA	11.566	1.493	Oct 2009	0.000		0.000		0.000	0.000	13.059	13.059
		Subtotal	20.244	1.493		0.000		0.000		0.000	0.000	21.737	21.737

Remarks

Support (\$ in Millions)

(*	,												
				FY 2	2010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	WR	VARIOUS Various	4.340	0.000		0.000		0.000		0.000	0.000	4.340	Continuing
		Subtotal	4.340	0.000		0.000		0.000		0.000	0.000	4.340	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604221N: P-3 Modernization Program

1152: P-3 Sensor Integration

Test and Evaluation (\$ in Millions)

				FY 2	010	FY 2 Ba	-	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWCAD Pax River, MD	2.438	0.000		0.000		0.000		0.000	0.000	2.438	Continuing
		Subtotal	2.438	0.000		0.000		0.000		0.000	0.000	2.438	

Remarks

Management Services (\$ in Millions)

				FY 2	010	FY 2 Ba	-	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	WR	SPAWARSYSC Charleston, SC	0.263	0.000		0.000		0.000		0.000	0.000	0.263	Continuing
Government Engineering Support	WR	NAWCAD Pax River, MD	1.747	0.000		1.369	Nov 2010	0.000		1.369	5.709	8.825	Continuing
Travel	WR	NAWCAD Pax River, MD	0.826	0.000		0.100	Oct 2010	0.000		0.100	0.400	1.326	Continuing
		Subtotal	2.836	0.000		1.469		0.000		1.469	6.109	10.414	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604221N: P-3 Modernization Program

1152: P-3 Sensor Integration

	Total Prior Years Cost	FY 2010	FY 2 Ba	2011 se		2011 FY 2011 CO Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	29.858	1.493	1.469		0.000	1.46	6.109	38.929	21.737

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

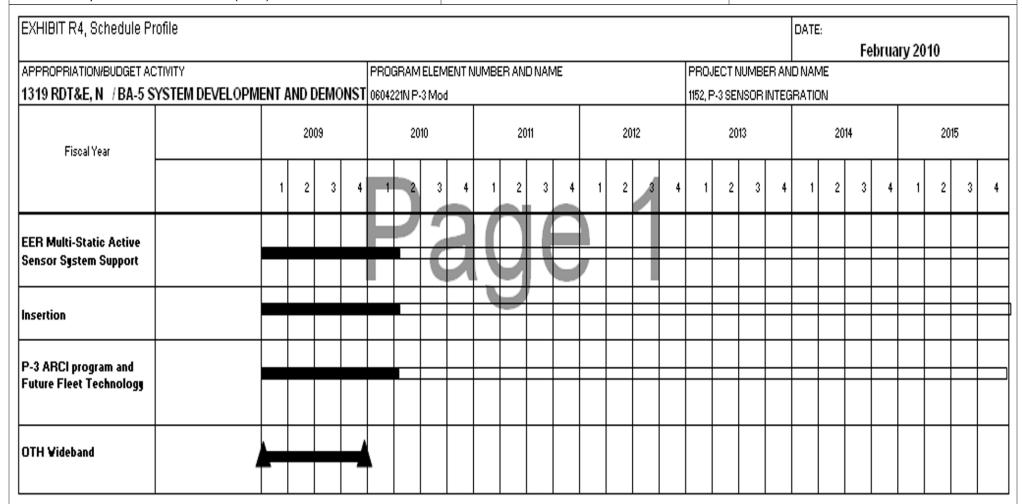
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604221N: P-3 Modernization Program

PROJECT

1152: P-3 Sensor Integration



UNCLASSIFIED

R-1 Line Item #86 Page 9 of 16

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
1319: Research, Development, Test & Evaluation, Navy	PE 0604221N: P-3 Modernization Program	1152: <i>P-3</i> S	Sensor Integration
BA 5: Development & Demonstration (SDD)			

Schedule Details

	St	art	End		
Event	Quarter	Year	Quarter	Year	
EER Multi-Static Active Sensor System Support	1	2009	4	2015	
EER Multi-Static Fleet Technology Insertion	1	2009	4	2015	
P-3 ARCI and Future Fleet Technology Insertion	1	2009	4	2015	
P-3 OTH Wideband	1	2009	4	2009	

DATE: February 2010

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)					I OMENCLA 1N: <i>P-3 Mod</i>	TURE dernization P	rogram	PROJECT 3016: Fatigue Life Mgmt Program						
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost			
3016: Fatigue Life Mgmt Program	1.349	2.151	2.105	0.000	2.105	2.135	2.172	2.223	2.269	Continuing	Continuing			

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A. Mission Description and Budget Item Justification

Quantity of RDT&E Articles

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

Fatigue Life Management Program is required to manage P-3/EP-3 inventory fatigue life and includes ongoing structural analysis, analyzing emergent structural issues, conducting engineering studies, assessing Fleet impact, and applying new technologies such as Non-Destructive Inspection (NDI) techniques

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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
P-3/EP-3 Fatigue Life Management	1.349	2.151	2.105	0.000	2.105
FY 2009 Accomplishments: Fatigue Life Management Program: Manage P-3/EP-3 inventory fatigue life including conducting structural analysis, analyzing structural issues, conducting engineering studies, assessing Fleet impact. Research, test and apply new Fatigue Inspection techniques to the P-3/EP-3 Fleet.					
FY 2010 Plans: Fatigue Life Management Program: Manage P-3/EP-3 inventory fatigue life including conducting structural analysis, analyzing structural issues, conducting engineering studies, assessing Fleet impact. Research, test and apply new Fatigue Inspection techniques to the P-3/EP-3 Fleet.					
FY 2011 Base Plans: Fatigue Life Management Program: Manage P-3/EP-3 inventory fatigue life including conducting structural analysis, analyzing structural issues, conducting engineering studies, assessing Fleet impact. Research, test and apply new Fatigue Inspection techniques to the P-3/EP-3 Fleet.					
Accomplishments/Planned Programs Subtotals	1.349	2.151	2.105	0.000	2.105

UNCLASSIFIED

R-1 Line Item #86 Page 11 of 16

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy

PE 0604221N: P-3 Modernization Program

3016: Fatigue Life Mgmt Program

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• APN/0538: <i>P-3 Series</i>	340.100	462.400	222.000	6.000	228.000	202.400	66.800	44.800	12.000	0.000	4.967.000

D. Acquisition Strategy

The Fatigue Life Management Program leverages off of prior work done under P-3 SLAP (2451). The ASUW Improvement Program (AIP) ORD 355-88-94 was approved 30 March 94. PMP #0526 Ser 902D1/6U324405 was approved on 6 Feb 1986. Navy Decision Coordination Paper W-0484-AS was signed 23 Jun 1984. Work will be performed by LMAS and other industry participants along with the NAVAIR Structural Engineering Dept, AIR-4.3. This program supports the 7 June 2003 CNO approved P-3/EP-3 Sustainment Bridge to MMA.

E. Performance Metrics

Successful application of system engineering processes.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604221N: P-3 Modernization Program

3016: Fatigue Life Mgmt Program

Product Development (\$ in Millions)

				FY 2010		FY 2011 Base		FY 2	-	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	C/CPIF	LM Marietta, GA	5.116	1.173	Jan 2010	1.085	Jan 2011	0.000		1.085	3.935	11.309	11.309
		Subtotal	5.116	1.173		1.085		0.000		1.085	3.935	11.309	11.309

Remarks

Management Services (\$ in Millions)

				FY 2	FY 2010		2011 se	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	VARIOUS VARIOUS	4.025	0.755	Nov 2009	0.850	Nov 2010	0.000		0.850	4.000	9.630	Continuing
Program Management Support	WR	VARIOUS VARIOUS	0.000	0.200	Nov 2009	0.070	Nov 2010	0.000		0.070	0.400	0.670	Continuing
Travel	WR	NAWCAD PAX RIVER, MD	0.588	0.023	Oct 2009	0.100	Oct 2010	0.000		0.100	0.464	1.175	Continuing
		Subtotal	4.613	0.978		1.020		0.000		1.020	4.864	11.475	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)

PE 0604221N: P-3 Modernization Program

3016: Fatigue Life Mgmt Program

	Total Prior Years Cost	FY 2010	FY 2	2011 Ise	FY 2	I	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	9.729	2.151	2.105		0.000	2.105	8.799	22.784	11.309

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 5: Development & Demonstration (SDD)

DATE: February 2010

R-1 ITEM NOMENCLATURE
PE 0604221N: P-3 Modernization Program
3016: Fatigue Life Mgmt Program

XHIBIT R4, Schedule Profile																					DATE		F	ebrua	ary 20	010		
APPROPRIATION/BUDGET ACTIVITY					PROG	BRAM	ELEM	ENT N	JUMBI	ER AN	DNAN	1E					PRO.	JECT N	JUMBI	ER AN	ID NAN	ИE						
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Fiscal Year	2009 Fiscal Year		09			20	10			20	11			20	12			20	13		2014				2015			
	1	1 2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	
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R-1 Line Item #86 Page 15 of 16

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
1319: Research, Development, Test & Evaluation, Navy	PE 0604221N: P-3 Modernization Program	3016: Fatig	ue Life Mgmt Program
BA 5: Development & Demonstration (SDD)			

Schedule Details

	St	art	End				
Event	Quarter	Year	Quarter	Year			
Inventory Fatigue Life Management/Sustainment	1	2009	4	2015			